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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/430,289	10/29/1999	KEITH R. D'ALESSIO	100497.02	7047

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EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

21

DATE MAILED: 07/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-21

Office Action Summary

Application No.

09/430,289

Applicant(s)

D'ALESSIO ET AL.

Examiner

Sow-Fun Hon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 21-44, 51-55, 57 and 58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 45-50, 56 and 59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>12</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Rejections Withdrawn

2. The declaration with comparative surface energy data under 37 CFR 1.132 filed 06/21/02 is sufficient to overcome the rejections of claims 1-20, 45-50, 56, 59 based upon Colvin et al.

Rejections Repeated

3. The 35 U.S.C. 112, 2nd paragraph rejection of claims 6-8, 15 has been repeated for the same reasons previously of record in Paper # 11, paragraph 8 (mailed 07/06/01). The reference cited by Applicant does not clearly define the different types of polyethylene in terms of density. Applicant is respectfully advised that interference proceedings between unrelated parties have been initiated over the overlap in densities of low density polyethylene with linear low density polyethylene.

New Rejections

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-6, 8-11, 16, 18-19, 45-46, 56, 59 are rejected under 35 U.S.C. 102(e) as being anticipated by Tetsuro.

Tetsuro teaches a container comprising a polyolefin resin, for containing a cyanoacrylate (1,1-disubstituted ethylene monomer) adhesive (abstract). The polyolefin is either polyethylene or polypropylene. The polyethylene is either high density or low density polyethylene (column 4, lines 30-35). The fluororesin on the surface of the polyolefin container body is treated with post-fluorination (specific treatment after application and drying by Fluoro-Seal) (column 4, lines 40-50). Tetsuro teaches that a reaction-inhibiting gas which is a halogen-containing acid (weakly acidic boron trifluoride) is in the container body (column 4, lines 10-25). It is the examiner's position that the package of Tetsuro has the desired shelf life of at least about thirty months.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 6-7, 15-20, 47, 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuro in view of Kvidtrud et al.

Tetsuro teaches a container for cyanoacrylates with a coating layer comprising postfluorinated resin and a halogen-containing acid, but fails to teach the carboxylic acid CO₂H functionality containing polyethylene terephthalate.

Kvidtrud et al. has a container with a dispenser nozzle (squeezable vial with threaded closure cap having a dispensing opening), which can be used for dispensing cyanoacrylate adhesives (column 1, lines 10-35 and column 3, lines 1-10). Suitable polymeric materials for making the vial include blowmolded low density polyethylene, high density polyethylene (HDPE) and carboxylic acid CO₂H functionalized polyethylene terephthalate (PET) (column 3, lines 35-45). Kvidtrud et al. teaches that the polymeric material has sufficient memory to enable the sections to recover from deformation and fully return to their original shape once finger pressure is released (column 3, lines 25-35).

Because Kvidtrud et al. teaches that low density polyethylene, high density polyethylene (HDPE), polyethylene terephthalate (PET) all have sufficient memory to enable the sections to recover from deformation and fully return to their original shape once finger pressure is released, it would have been obvious to one of ordinary skill in the art to have used the polymeric resin of carboxylic acid CO₂H functionalized polyethylene terephthalate of Kvidtrud et al. in place of the polyolefin resins in the invention of Tetsuro in order to obtain a squeezable container made of an alternate polymeric material.

8. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuro in view of Stehlik.

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Tetsuro teaches a container for cyanoacrylate adhesives with a coating layer comprising postfluorinated resin and a halogen-containing acid, but fails to specify the alkyl type of cyanoacrylate or the claimed hydrofluoric acid.

Stehlik has a process for sterilizing (alkyl) alpha-cyanoacrylates with radiation, using hydrofluoric acid (hydrogen fluoride) as the Lewis acid inhibitor (column 1, lines 15-50). It would have been obvious to one of ordinary skill in the art to have used hydrochloric acid as an alternate Lewis acid inhibitor which results in the use of post-chlorination instead of post-fluorination treatment of the polymeric material of the container body. The alkyl group has 1-16 carbon atoms (column 1, lines 20-45) which includes 2-octyl cyanoacrylate.

Stehlik teaches that the sterilization process on the combination of the alkyl cyanoacrylate and hydrofluoric acid produces a package combination which has a shelf life of at least about thirty months (should not result in reduced stability within a period of at least one year) (column 1, lines 65-72 and column 2, lines 1-5).

Because Stehlik teaches that the sterilization process on the combination of the alkyl cyanoacrylate and hydrofluoric acid produces a package combination which has a shelf life of at least about thirty months, it would have been obvious to one of ordinary skill in the art to have used the sterilization process on the combination of the alkyl cyanoacrylate and hydrofluoric acid of Stehlik in the invention of Tetsuro in order to obtain a package combination which has a shelf life of at least about thirty months.

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9. Claims 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuro in view of Bauman et al. (US 4,764,405).

Tetsuro teaches container package with the fluorine modification or functionalization of the polyolefin container, but fails to teach the SO₃H group functionalization.

Bauman et al. has a method of increasing the barrier properties of thermoplastic substrates (abstract) which can be high density polyethylene, low density polyethylene, polypropylene and polyethylene terephthalate. Bauman et al. teaches fluorine (F₂) and oxygen in the treating gas to enhance the desired adhesion of the barrier coating along with sulfur trioxide SO₃ to enhance performance of the coating (column 3, lines 1-45). The resultant surface energy is raised with the formation of the (F and SO₃H) functionalities and permits adhesion of barrier coatings to the surface (column 4, lines 1-35).

Because Bauman et al. teaches that the resultant surface energy is raised with the formation of the (F and SO₃H) functionalities and permits adhesion of barrier coatings to the surface, it would have been obvious to one of ordinary skill in the art to have used the F₂/SO₃ gas taught by Bauman in the invention of Tetsuro in order to obtain a container surface with F and SO₃H functionalities which permit adhesion of barrier coatings.

10. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuro in view of Bauman et al. as applied to claim 48 above, and further in view of Walles (US 4,775,587).

Tetsuro teaches container package with the fluorine modification or functionalization of the polyolefin container, but fails to teach the sulfonamide group functionalization.

Bauman et al. teaches the F and SO₃H group functionalizations of the polyolefin monomer, but

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fails to teach the sulfonamide group functionalization.

Walles teaches that SO_3H group functionalization via the use of SO_3 gas of polyethylene terephthalate, polyethylene and polypropylene substrates (column 3, lines 15-30), and further reaction (neutralization) with ammonia (abstract) and water (column 5, lines 10-15). One of ordinary skill in the art would have known that ammonia dissolved in water forms ammonium hydroxide, and that the neutralization of the SO_3H group functionality with ammonium hydroxide then forms sulfonamide groups. Walles teaches that the addition of amide (ammonium) functionality to the sulfo (SO_3) functionality improves the effectiveness of the sulfonation treatment (column 1, lines 45-55) which decreases the permeability, stress cracking and swelling of the polymeric substrate (column 2, lines 1-15).

Because Walles teaches that the addition of amide (ammonium) functionality to the sulfo (SO_3) functionality improves the effectiveness of the sulfonation treatment which decreases the permeability, stress cracking and swelling of the polymeric substrate, it would have been obvious to one of ordinary skill in the art to have used the sulfonamide group functionalization of Walles in the invention of Tetsuro in order to obtain a container surface with decreased permeability, stress cracking and swelling of the polymeric substrate.

Response to Arguments

11. Applicant's arguments with respect to claims 1-20, 45-50, 56, 59 have been considered but are moot in view of the new ground(s) of rejection.


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Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH
07/03/02


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

7/3/02